

1639

PATENT  
SP00-230

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor: Joydeep Lahiri, *et al.*

Serial No: 09/854,786

Filing Date: May 14, 2001

Title: ARRAYS OF BIOLOGICAL MEMBRANES AND  
METHODS AND USES THEREOF

Art Group Unit: 1639

Examiner: My Chau T. Tran

RESPONSE

Commissioner for Patents  
Alexandria, VA 22313-1450

MAR 11 2004

RESPONSE TO RESTRICTION REQUIREMENT

In the Office Action dated November 17, 2003, designated as Paper No. 21, in the above-captioned application, the Examiner issued a Restriction Requirement identifying the following groups of claims as being drawn to potentially distinct inventions:

- Group a). A single specific species of condition of the array;
- Group b). A single specific species of protein;
- Group c). A single specific species of substrate; and
- Group d). A single specific species of substrate coating.

The Examiner asserted that these inventions may be regarded as independent and distinct from one another because each species have different chemical structure and/or physiochemical properties and would be capable of separate manufacture and/or use; and would necessitate different and separately burdensome manual and computer bibliographic and structure searches in both patent and non-patent areas.

Applicant respectfully traverses the Examiner's Restriction Requirement on the grounds that the proposed inventions are inextricably intertwined, and prosecution of the proposed groups of claims together would be most effective for the Office. In order to conduct a comprehensive search regarding any one of the groups, including the group provisionally elected above, it would be inherently necessary to review the same pertinent fields and classes of prior art relating to the other groups. Moreover, the important questions of patentability and claim interpretation are likely to be based on substantially similar issues and evaluations for each group of claims, and would require consideration of the same prior art, and combined prosecution is therefore less likely to result in inconsistent or conflicting file

histories. As such, Applicant respectfully requests that the Examiner withdraw the Restriction Requirement in the next subsequent Office Action, and continue prosecution of the currently pending claims together.

To comply with the Examiner's Restriction Requirement, nonetheless, Applicant designates the following species for prosecution:

- Group a). Specific species of condition of the array = ambient humidity;
- Group b). Specific species of protein = membrane proteins;
- Group c). Specific species of substrate = glass; and
- Group d). Specific species of substrate coating = silane.

And, Applicant identifies the following claims as readable thereon for further prosecution: 1, 2, 3, 4, 5, 7, 8, 9, 10, 15, 16, 17, 19, 20, 21, 26, 27, 29, 30, 31, 51, 52, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 68, 69, 70, 71, 72, 73, 74, 79, 84, 86.

Applicant notes, however, that the environmental conditions (i.e., "air-water interface" or "ambient humidity") properly should not be considered as separate and distinct species. These conditions characterize certain attributes of the inventive arrays that are not necessarily mutually exclusive conditions relative to one another. In other words, an array can have the biological membranes remain both adhered to the substrate surface when drawn through an air-water interface, as well as being functional when exposed to air under ambient humidity, since one characteristic does not automatically preclude the other. Hence, Applicant includes certain claims for prosecution that also recite "air-water interface."

In compliance with the Examiner's directive, Applicant provides a drawing illustrating the chemical structure of the elected substrate coating, and states that a preferred substrate material is either a borosilicate or boro-aluminosilicate glass, preferably with low or trace levels of sodium.

Applicants believe that a two (2) month extension of time is necessary to make this Response timely. Should Applicants be in error, Applicants respectfully request the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Response timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

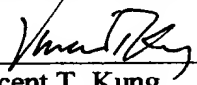
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Please direct any questions or comments to Vincent T. Kung at (607) 974-0608.

Respectfully submitted,

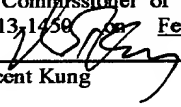
CORNING INCORPORATED

Date: February 20, 2004

  
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**CERTIFICATE OF MAILING UNDER 37 C.F.R.**

**§ 1.8:** I hereby certify that this paper and any papers referred to herein are being deposited with the U.S. Postal Service, as first class mail, postage prepaid, addressed to Commissioner of Patents, Alexandria, VA 22313-1450 on February 20, 2004

  
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Vincent Kung